UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

NOV 14 2014

Thomas D. Blackman
Project Lead, Environmental Remediation
Lockheed Martin Corporation
MP: CCT-246
6801 Rockledge Drive
Bethesda, Maryland 20817

Dear Mr. Blackman:

This letter is in response to the Lockheed Martin Corporation RBDAA for PCB-Contaminated Sediment Outfall 005 Sediment Removal Action (SRA) at the Middle River Complex, Middle River, Maryland, provided to Region III of the United States Environmental Protection Agency (EPA) on November 4, 2014, pursuant to the requirements of the *Risk-based disposal approval* regulation, 40 CFR § 761.61(c).

The EPA has reviewed the RBDAA and has determined that (a) the sediment removal action to expeditiously address the area in Dark Head Cove that contains elevated concentrations of PCB-contaminated sediment is consistent with the requirements of 40 CFR § 761.61(c); and (b) the proposed activities to remove sediment adjacent to stormwater outfalls 005 East and 005 West will not pose an unreasonable risk of injury to health or the environment when conducted in accordance with the methods and procedures described in the RBDAA and the Technical Memorandum (Enclosure 1).

This approval relates only to the Outfall 005 SRA. The EPA is aware that this dredging project is the first component of a phased remedial approach that will include additional dredging of PCB-contaminated sediments in Dark Head Cove, *in situ* treatment of PCB-contaminated sediment in Dark Head Cove, and remediation of the upland PCB contamination, including the storm drain systems and the parcel Tax Block E. This approval is issued with the understanding that all of the remedial phases will be addressed in future applications to EPA Region III by Lockheed Martin Corporation. This approval does not relieve Lockheed Martin Corporation from complying with all other applicable federal, state, and local regulations and permits. Departure from the approval conditions without prior written permission from EPA may result in the commencement of proceedings to revoke this approval.

This approval does not constitute a finding by EPA that the Lockheed Martin Corporation Middle River Complex will be safe or appropriate for any future use, does not insulate the owner or occupant of the property from action under any applicable law, and does not relieve any owner or operator of the continuing responsibility to fully comply with 40 CFR Part 761.

The EPA is requesting that an Outfall 005 SRA report be submitted to EPA within 90 days of the SRA completion, including, but not limited to (a) the results of all bathymetric surveys, (b) all turbidity monitoring results, (c) all PCB water and sediment confirmation results and supporting laboratory reports, (d) copies of manifests and certificates of disposal, and (e) total amounts of disposed PCB waste.

Any questions concerning this approval should be directed to Sharon D. Kenny, Remedial Project Manager (RPM), at 215-814-3417 or kenny.sharon@epa.gov.

Sincerely,

John A. Armstead, Director
Land and Chemicals Division
U.S. Environmental Protection Agency
Region III

Enclosure

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SUBJECT: Risk-Based Disposal Approval Application for PCB-Contaminated Sediment Outfall 005 Sediment Removal Action at the Middle River Complex, Lockheed Martin dated November 4, 2014 — November 13, 2014

FROM: Ruth Prince, Toxicologist
Office of Technical and Administrative Support
Land and Chemicals Division

TO: John Armstead, Director
Land and Chemicals Division

It is recommended that this application be approved under 40 CFR § 761.61(c), based upon the finding that this risk-based disposal will not pose an unreasonable risk of injury to health or the environment.

Disposal Summary

This application proposes to remove, dewater, and dispose approximately 6,200 cubic yards of PCB-contaminated aquatic sediment from Dark Head Cove, situated offshore of the Lockheed Martin Middle River Complex in Middle River, Maryland. The cove feeds into the Middle River of the Chesapeake Bay. The contaminated sediment will be mechanically dredged using a crane with a 4 cubic yard, level-cut environmental (closed and sealed when actuated) clamshell bucket, stationed on a dredge barge. The dredging will remove between two and five vertical feet of bottom sediment, working in approximately a 10 foot water depth. The dredged sediment will first be dewatered on a geotextile-lined deck barge, then transferred by environmental clamshell bucket to an on-land haul truck over a spill apron. The haul truck will transfer the dredged sediment to the on-site dewatering pad, where further passive dewatering will occur along with the addition of drying agent. The dredged sediment must meet the requirements of the USEPA paint filter test, so that the water content of the dredged sediment is low enough for truck transport and landfill disposal. Stabilized sediment will be transported via lined and sealed trucks to a hazardous waste facility permitted under 40 CFR § 761.75, since the majority of this sediment contains ≥ 50 mg/kg PCBs. The water accumulated from the drying sediment on the dewatering pad will be pumped to an on-site water treatment system. Finished water will be sampled and analyzed to demonstrate compliance with the < 3 ug/L PCBs requirement of 40 CFR § 761.50(a)(3), and then discharged by permit to the Baltimore County Sanitary Sewer system POTW.

Measures to Protect the Environment

When dredging contaminated sediments for the purpose of environmental remediation, the overall goal is to remove the contaminated sediment while minimizing the dispersion of that contaminated sediment into the aquatic environment. This application proposes to use a

combination of best management practices and monitoring of the aquatic environment via real-time turbidity sensors to achieve this goal. Furthermore, state and federal agencies will only permit this dredging activity over the winter, to avoid impacting the migration and reproduction of aquatic resources.

Best management practices for this application include the following.

- The use of the environmental clamshell bucket for dredging reduces the mechanical loss of sediment to a small fraction of the total sediment removed, since the bucket closes and seals during operation, allowing primarily just the entrained water to escape. A recent study estimated the maximum sediment resuspension rate for this equipment to be 2.2%.
- An outer boomed silt curtain enclosing the entire sediment removal action area will be coupled with an inner boomed silt curtain surrounding the dredge cell being actively worked. Silt curtains are estimated to contain 80 – 90% of suspended sediment during dredging. A double silt curtain system should be very effective in minimizing dispersion of suspended sediment beyond the sediment removal action area. In addition, the sediment removal action area is situated in a cove subject only to tidal influence, lacking a strong current that promotes dispersion.
- An extensive real-time turbidity monitoring system will be utilized that includes three compliance points 100 ft downstream of the outer silt curtain. Background monitoring stations further downstream will be used to establish a continuous turbidity action level (for both upper and lower water depths). Corrective actions will be taken should the compliance point turbidity readings exceed the action level by 5 NTUs (nephelometric turbidity units), until the compliance point turbidity readings return to $\leq$ the action level. Corrective actions include silt curtain inspection and alterations in dredging operation up to dredging cessation. Furthermore, early warning turbidity monitoring locations will be utilized both within the silt curtains and 50 ft downstream of the outer silt curtain, so that corrective action can be taken prior to, and to avoid, a compliance point exceedance of the action level.
- Multiple erosion and sedimentation controls, and spill prevention controls, will be utilized to prevent upland contamination during sediment dewatering and handling. All sediment handling areas will be enclosed by super silt fences, the dewatering pads will be fully geomembrane lined, and the offloading area will have an additional spill protection apron and berms. All water draining from the dredged material and contact stormwater will be contained and treated in an on-site water treatment system to attain the discharge limit of < 3 ug/L PCBs for the permitted POTW. All sediment transport trucks will be equipped with impermeable liners.
- MDE and EPA will conduct unannounced inspections as part of their oversight activities at the site.

Measures to Protect Site Workers

The on-site workers will operate in accordance with a site-specific health and safety plan that will be enforced by a Health and Safety Officer who will be on site during all operations. The plan requires site-specific training addressing contamination avoidance principles, in addition to hazardous waste training. The health and safety plan also includes detailed requirements for each sediment removal action task, specifying the required PPE (personal protective equipment) and decontamination procedures.

Community Outreach

Lockheed Martin has collaborated with both EPA and MDE in conducting extensive community outreach regarding this sediment removal action to ensure adequate public participation has occurred. Since January 2014, Lockheed Martin has held three Public Information Sessions advertised via two local newspapers over two weeks, as well as separate Civic Association Leaders briefings for each Public Information Session. EPA and/or MDE has typically attended these sessions to respond to community questions or concerns. Lockheed Martin has distributed three newsletters and/or Citizen's Guides in 2014 regarding the sediment removal action to a mailing list of over 500 individual names, with a potential distribution to 3,000 through the neighboring civic associations. Lockheed Martin has also briefed the Chesapeake Bay Foundation and Baltimore County leaders, as well as attending a number of community events during summer 2014 to share information on the sediment removal action.